

CLAIMS

I claim:

1 1. A method of creating a virtual disk storage construct using
2 disk storage consolidated from at least two grid computers of a
3 computing grid, comprising:

4 locating an unused portion of a total disk storage space on
5 disk drives of at least two grid computers of the computing grid;
6 and

7 presenting a portion of the total disk storage space of each of
8 the at least two grid computers as a single virtual storage drive on
9 at least one computer.

1 2. The method of claim 1 additionally including allocating a
2 portion of the total disk storage space on each of the at least two
3 grid computers to be made available as part of the virtual storage
4 drive.

1 3. The method of claim 2 additionally including reserving a
2 portion of the total disk storage space on each of the at least two
3 grid computers for local use.

1 4. The method of claim 1 additionally including determining
2 the total disk storage space on each of the at least two grid
3 computers and allocating the total disk storage space between a
4 portion made available for use as part of the virtual storage drive
5 and a portion reserved for local use on the grid computer.

1 5. The method of claim 1 additionally including maintaining
2 a table of grid computers contributing storage space to the virtual
3 storage drive and corresponding amounts of storage space made
4 available by each contributing grid computers.

1 6. The method of claim 1 additionally including monitoring
2 at least one of the grid computers for activity indicating that
3 additional disk storage space has been added to the at least one grid
4 computer.

1 7. The method of claim 6 additionally including allocating
2 disk storage space on the at least one grid computer after detecting
3 activity indicating that additional storage space has been added to
4 the at least one grid computer.

1 8. The method of claim 1 additionally including monitoring
2 at least one of the grid computers for activity indicating that a
3 minimum amount of free disk storage space has been violated.

1 9. The method of claim 8 additionally including allocating
2 disk storage space on the at least one grid computer after detecting
3 activity indicating that the minimum amount of free disk storage
4 space has been violated to restore at least the minimum amount of
5 free disk storage space.

1 10. The method of claim 1 additionally including providing a
2 safe area on disk storage space of the virtual storage drive, the safe
3 area being kept free of data.

1 11. The method of claim 1 additionally including loading an
2 agent application on each of the grid computers for managing disk
3 storage space on the grid computer made available to the virtual
4 storage drive.

1 12. The method of claim 4 additionally comprising copying
2 data from a reserved portion of the disk storage space of at least
3 one of the grid computers to an available portion of at least two
4 other grid computers of the computing grid that have been made
5 available to the virtual storage drive to thereby backup the copied
6 data from the reserved portion of the at least one grid computer.

1 13. A computer readable medium tangibly embodying a
2 program of instructions implementing the following method of
3 creating a virtual disk storage construct using disk storage
4 consolidated from at least two grid computers of a computing grid:
5 locating an unused portion of a total disk storage space on
6 disk drives of at least two grid computers of the computing grid;
7 and
8 presenting a portion of the total disk storage space of each of
9 the at least two grid computers as a single virtual storage drive on
10 at least one computer.

1 14. The computer readable medium of claim 13 additionally
2 implementing the step of allocating a portion of the total disk
3 storage space on each of the at least two grid computers to be made
4 available as part of the virtual storage drive.

1 15. The computer readable medium of claim 14 additionally
2 implementing the step of reserving a portion of the total disk
3 storage space on each of the at least two grid computers for local
4 use.

1 16. The computer readable medium of claim 13 additionally
2 implementing the step of monitoring at least one of the grid
3 computers for activity indicating that additional disk storage space
4 has been added to the at least one grid computer.

1 17. The computer readable medium of claim 13 additionally
2 implementing the step of monitoring at least one of the grid
3 computers for activity indicating that a minimum amount of free
4 disk storage space has been violated.

1 18. The computer readable medium of claim 13 additionally
2 implementing the step of providing a safe area on disk storage
3 space of the virtual storage drive, the safe area being kept free of
4 data.

1 19. The computer readable medium of claim 15 additionally
2 implementing the step of copying data from a reserved portion of
3 the disk storage space of at least one of the grid computers to an
4 available portion of at least two other grid computers of the
5 computing grid that have been made available to the virtual storage
6 drive to thereby backup the copied data from the reserved portion
7 of the at least one grid computer.